CLAIMS

1. Method for treating unpackaged biological liquids, particularly milk or its derivatives, having a microbacterial and spore content, comprising the following operative steps:

a) separating said biological liquid into a fatty fraction having a higher concentration of fatty matter and a non-fatty fraction having a lower concentration of fatty matter compared to the initial concentration;

b) complete conditioning heat treatment of said non-fatty fraction;

c) cooling said non-fatty fraction to a temperature close to the storage temperature (**Tc**);

d) preheating said fatty fraction to a predetermined temperature (**Ts**);

e) irradiating said preheated fatty fraction with electromagnetic radiation for a predetermined time (t_{irr});

f) cooling said fatty fraction to a temperature close to the storage temperature (**Tc**);

g) mixing said fatty and non-fatty fractions, which have been treated and cooled separately, so as to reconstitute said biological liquid treated at a temperature close to the storage temperature (**Tc**).

2. Method according to Claim 1, characterized in that said electromagnetic radiation is in the radio-frequency range.

3. Method according to Claim 2, characterized in that the radio frequency of said electromagnetic radiation is less than 1 GHz.

4. Method according to Claim 2, characterized in that said irradiation time (t_{irr}) in said step e) is between 1 second and 5 seconds and is preferably close to 1.5 seconds.

5. Method according to Claim 4, characterized in that said heat treatment step b) consists of sterilisation and the preheating temperature (**Ts**) of

the fatty fraction is between 140°C and 150°C, and is preferably close to 145°C.

6. Method according to Claim 4, characterized in that said heat treatment step b) is pasteurisation and the preheating temperature (**Ts**) is between 70°C and 75°C, and is preferably close to 72°C.

7. Method according to Claim 4, characterized in that said heat treatment b) consists of heating to temperatures of between 90°C and 125°C and the preheating temperature (**Ts**) is between 115°C and 125°C, and is preferably close to 120°C.

8. Method according to Claim 4, characterized in that said heat treatment step b) consists of heating to temperatures of between 80°C and 100°C, and the preheating temperature (**Ts**) is between 85°C and 95°C, and is preferably close to 90°C.

9. Method according to one or more of the preceding claims characterized in that, after said irradiation step e), it comprises a further step h) of exposure to the predefined temperature (**Ts**) for a specific time (t_w).

10. Method according to Claim 9, characterized in that said time (t_w) is between 2 and 5 seconds, and is preferably close to 3 seconds.

11. Method according to one or more of the preceding claims, characterized in that said steps (a-g) are performed in conditions of continuous flow of the biological liquid to be treated.

12. Method according to one or more of the preceding claims, characterized in that said fatty fraction contains substantially all the fatty matter of the biological liquid to be treated.

13. Method according to one or more of the preceding claims,

characterized in that said fatty fraction is about 10% by weight of the biological liquid.

14. Plant for treating unpackaged biological liquids by way of implementation of the method according to one or more of the preceding claims, characterized in that it comprises:

a) means (**6**) for separating said biological liquid into a fatty fraction having a higher concentration of fatty matter and a non-fatty fraction having a lower concentration of fatty matter compared to the initial concentration in said biological liquid;

b) means (**U**) for heat treating said non-fatty fraction;

c) means (**11**) for cooling said non-fatty fraction to a temperature close to the storage temperature (**Tc**);

d) means (**13, 14**) for preheating said fatty fraction to a predefined temperature (**Ts**);

e) means (**15, 16**) for irradiating said fatty fraction with electromagnetic irradiation;

f) means (**18**) for cooling said fatty fraction to a temperature close to the storage temperature (**Tc**);

g) means (**9**) for mixing said fractions, which have been individually treated and cooled, so as to reconstitute the treated biological liquid.

15. Plant according to Claim 14, characterized in that said irradiation means comprise an oscillator (**16**) operating in the range of radio frequencies below 1 GHz.

16. Plant according to Claim 14, characterized in that said heat treatment means comprise means (**U**) for heating said non-fatty fraction to a temperature (**Ts**) of between 60°C and 150°C.

17. Plant according to Claim 14, characterized in that said preheating means (**13, 14**) comprise means for heating said fatty fraction to a temperature

(**Ts**) of between 60°C and 150°C.

18. Plant according to one or more of the preceding claims, characterized in that it comprises means (**17**) for keeping said fatty fraction at the predefined temperature (**Ts**) for a time (t_w).